

INSTRUCTION MANUAL

W296CS

107.1 MHz

Lakeland, FL

Antenna Model: PSIFML-1C-DA

Uncrating

When uncrating the antenna system, open each crate carefully so that the crates may be used to return any merchandise that may have been damaged in shipping. Separate all parts and confirm that all items on the packing list have been received. If any parts are missing, notify PSI or its agent prior to assembling the antenna. If any parts are damaged through shipment or are missing, **promptly** notify the shipping carrier and PSI.

General Notes:

1. Review antenna elevation and plan the installation. The antenna brackets have been designed for tower leg mount only. Be aware of possible mounting conflicts such as other antennas, guy wires, tower leg flanges, conduits etc. and plan accordingly.
2. All bays are to be aligned to the same azimuth angle.
3. Use only the supplied hardware.
4. Exercise care when assembling the 7-16 DIN connector.
5. Check a bracket on the tower leg for proper fit.
6. Install one bay at a time.
7. Keep all transmission lines free from dirt and moisture. All Teflon insulators must be clean and dry.
8. The antenna does not require pressurization.
9. The antenna has been tuned at the factory and should not require field adjustment.
10. The antenna system should be tested before the erector leaves the premises to insure that the complete antenna system is functioning properly.

Installation Procedure

Step One

Attach the horizontal parasitic element, 1451-003 to the antenna boom using the supplied #28 hose clamps as shown in drawings 1451-001 and -002. Next attach the antenna bay to the center of the support mast using the 1/2-13 x 6" bolts and back plate. Attach mast mounting bracket 1451-004 approximately 12" from each end of the support mast as shown in 1451-001 and -002.

Step Two

Hoist the assembled antenna bay and secure the bracket to the northeast tower leg at the 361 ft. elevation using the 3/8-16 x 2-15/16" U-bolts. Position the antenna 84° as shown in drawing 1451-002.

Step Three

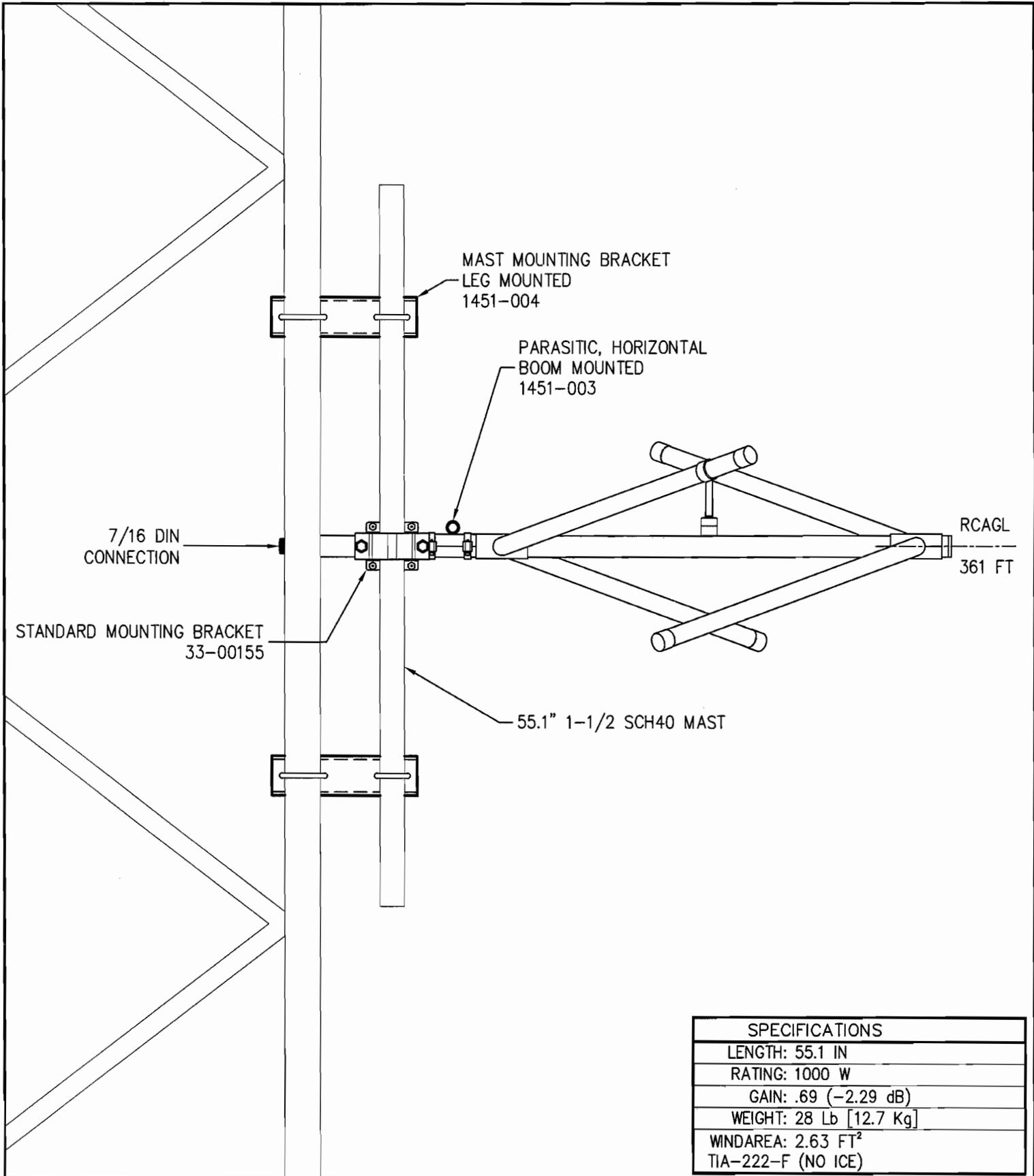
Check all bolted connections for tightness. Connect the main transmission line (not supplied) to the antenna input located at the end of the element boom. The antenna has a 7-16 DIN female input connector.

Drawing Index

| <u>Drawing</u> | <u>Title</u> |
|----------------|--------------------------------------|
| 1451-001 | Antenna Elevation and Specifications |
| 1451-002 | Plan View and Orientation |
| 1451-003 | Parasitic, Horizontal, Boom Mounted |
| 1451-004 | Mast Mounting Bracket, Leg Mounted |
| 33-00155 | Antenna Saddle Bracket |

Antenna Specifications

| | |
|--------------|--|
| Model | PSIFML-1C-DA |
| Description | 1-bay low power directional FM broadcast antenna |
| Frequency | 107.1 MHz |
| Polarization | Circular |
| Gain | .69 (-2.29 dB) |
| Input | 7-16 DIN female |
| Rating | 1000 W |
| Length | 4.59 ft. |
| Weight | 28 lbs. |
| Wind Area | 2.63 Sq. Ft. |



| SPECIFICATIONS | |
|--------------------|----------------------|
| LENGTH: | 55.1 IN |
| RATING: | 1000 W |
| GAIN: | .69 (-2.29 dB) |
| WEIGHT: | 28 Lb [12.7 Kg] |
| WINDAREA: | 2.63 FT ² |
| TIA-222-F (NO ICE) | |

| REV. | MADE BY CHECKED BY | DATE | CHANGE |
|------|-----------------------|------|--------|
| | | | |

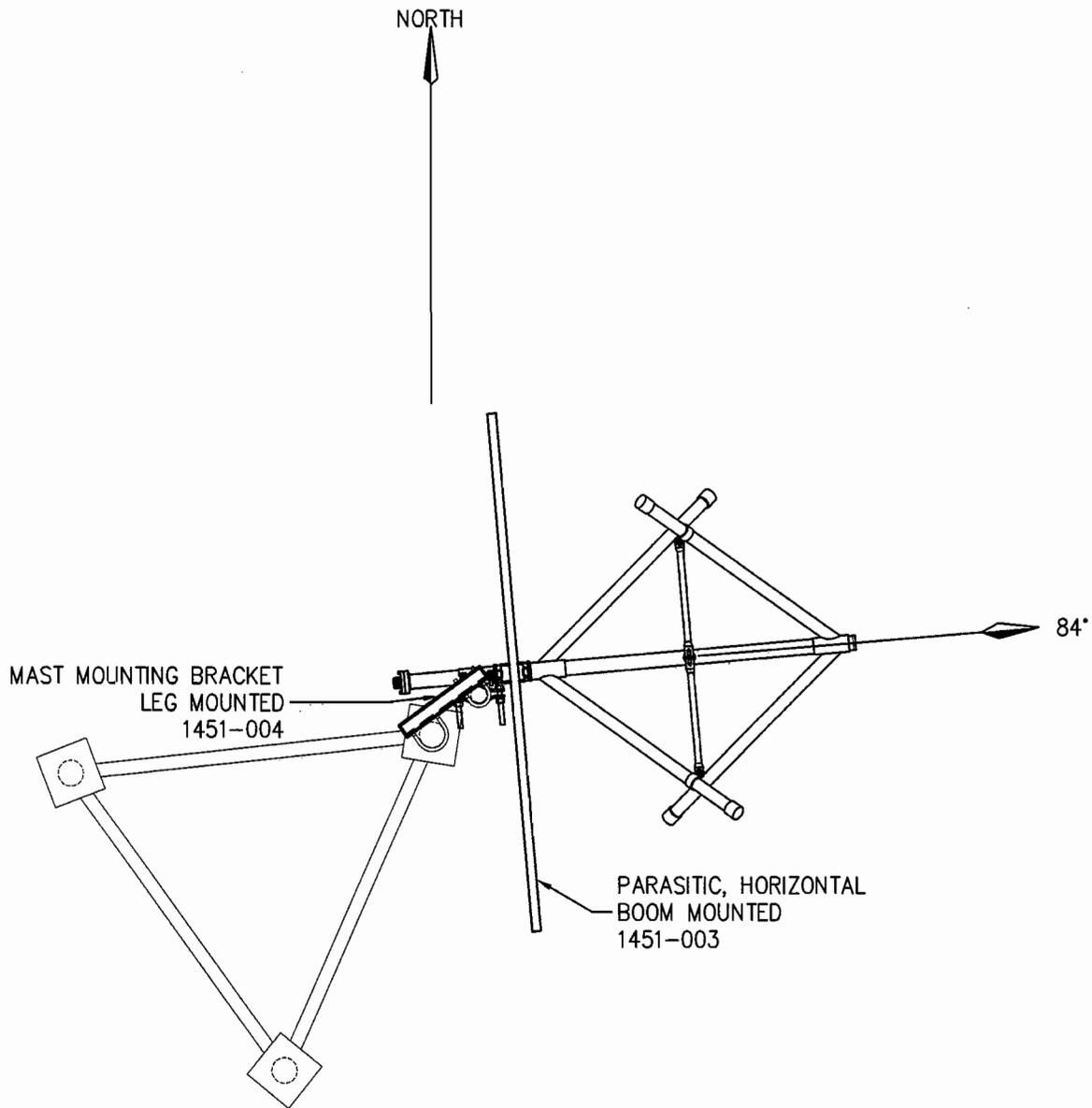
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PROPAGATION SYSTEMS, INC.
 Ebensburg, Pennsylvania, USA 814-472-5540

ANTENNA ELEVATIONS AND SPECIFICATIONS

| | | |
|-------------------------------------|----------------------------|-----------------|
| MODEL: PSIFML-1C-DA | DRAWN BY: B.K.SCHILLING | DATE: 6/3/15 |
| CHANNEL/ FREQUENCY: 107.1 MHz | APPROVED BY: | DATE: |
| SCALE: 1:10 | DRAWING NO.: | REV. |
| | 1451-001 | |

A



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| | | | | |

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PLAN VIEW AND ORIENTATION

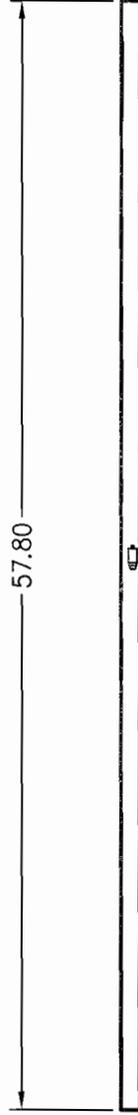
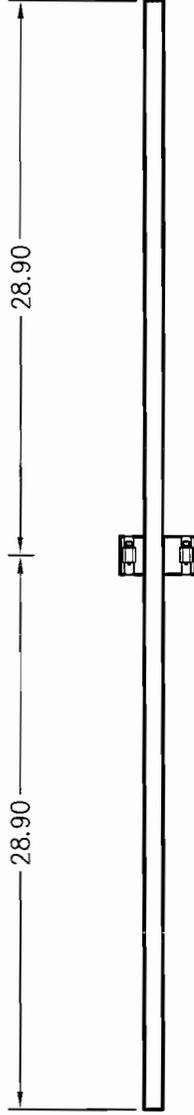
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SIZE

A

| | | |
|-------------------------------------|----------------------------|-----------------|
| MODEL: PSIFML-1C-DA | DRAWN BY: B.K.SCHILLING | DATE: 6/3/15 |
| CHANNEL/ FREQUENCY: 107.1 MHz | APPROVED BY: | DATE: |
| SCALE: 1:20 | DRAWING NO.: | REV. |

1451-002

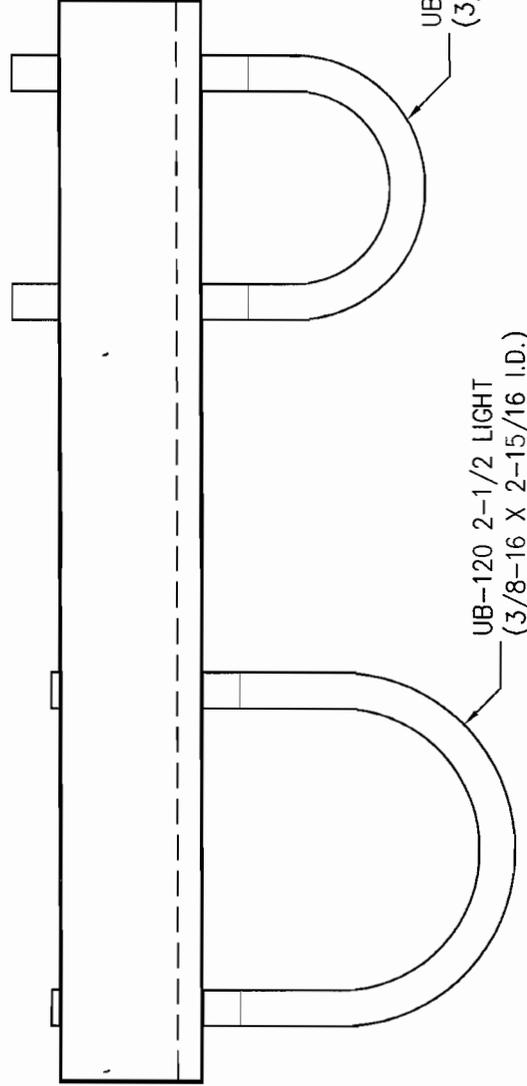
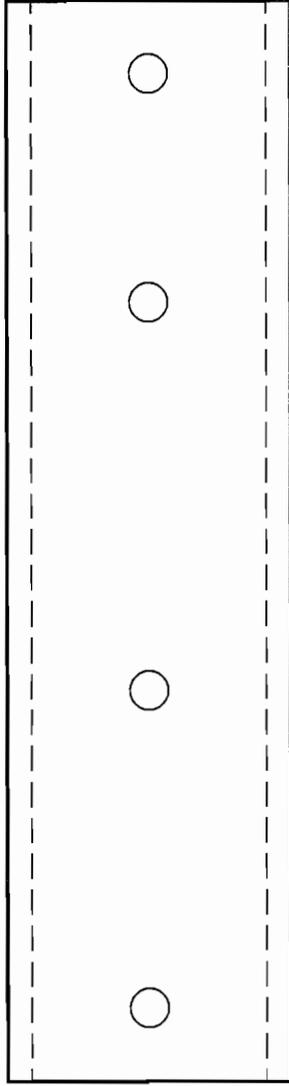


(2X) #28 HOSE CLAMP

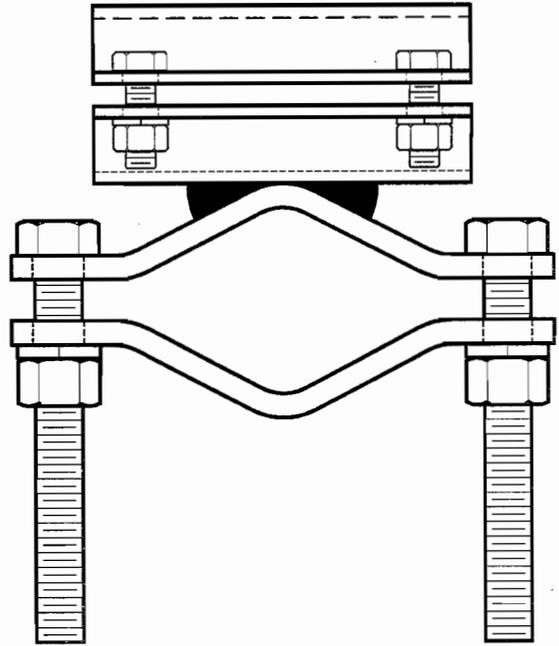
NOTES:

1. (1) REQUIRED
2. WEIGHT: 4.5 LB
3. WINDAREA: .4 FT²
4. HOT DIP GALVANIZED

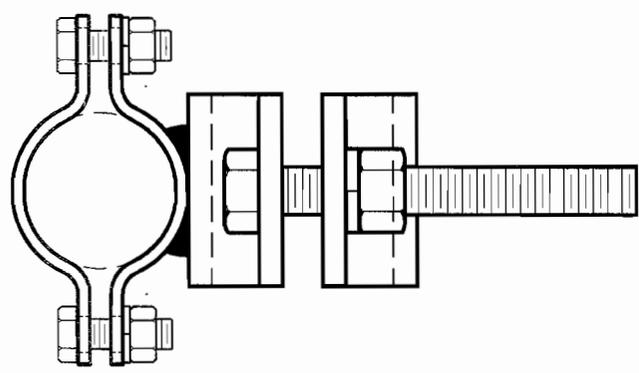
| | | |
|---|--------------------------------|----------------------|
| <p>PROPAGATION SYSTEMS, INC. Ebensburg, Pennsylvania USA</p> | | <p>DATE: 6/3/15</p> |
| <p>PARASITIC, HORIZONTAL, BOOM MOUNTED</p> | | <p>DATE:</p> |
| <p>MODEL: PSIFML-1C--DA</p> | <p>DRAWN BY: B.K.SCHILLING</p> | <p>DATE:</p> |
| <p>CHANNEL: 7</p> | <p>APPROVED BY:</p> | <p>DATE:</p> |
| <p>FREQUENCY: 107.1 MHZ</p> | <p>PART NO.:</p> | <p>SHEET</p> |
| <p>SCALE: 1:10</p> | <p>DRAWING NO.: 1451-003</p> | <p>REV.</p> |
| <p>MATERIAL:</p> | | |
| <p>SIZE: A</p> | | |
| <p>TOLERANCES UNLESS OTHERWISE NOTED: FRACTIONS 1/8" ± .01" DECIMALS .XX ± .005" ANGLES ± 3'</p> | | |
| <p>UNLESS OTHERWISE NOTED: FRACTIONS 1/8" ± .01" DECIMALS .XX ± .005" ANGLES ± 3'</p> | | |
| <p>THIS DRAWING IS LOANED SUBJECT TO THE EXPRESS UNDERSTANDING AND AGREEMENT THAT THE DRAWING AND INFORMATION THEREIN CONTAINED ARE, AND SHALL REMAIN THE PROPERTY OF PSI, AND WILL NOT BE OTHERWISE UTILIZED OR DISPOSED OF DIRECTLY OR INDIRECTLY, AND WILL NOT BE USED IN WHOLE OR IN PART OR ASSIST IN MAKING OR FINISHING ANY INFORMATION FOR THE MAKING OF DRAWINGS, PRINTS OR OTHER REPRODUCTIONS HEREOF, OR FOR THE DESIGN OR MAKING OF ANY ITEM, PART, OBJECT, APPARATUS OR PARTS THEREOF, EXCEPT UPON THE WRITTEN PERMISSIONS OF PSI FIRST OBTAINED. THE ACCEPTANCE OF THIS DRAWING WILL BE CONSTRUED AS AN ACCEPTANCE OF THE FOLLOING AGREEMENT.</p> | | |
| <p>REV.</p> | <p>MADE BY / CHECKED BY</p> | <p>DATE / CHANGE</p> |



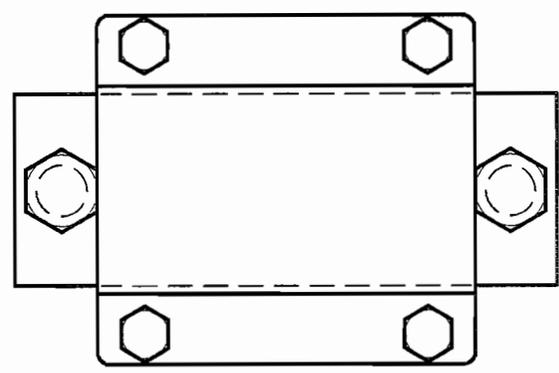
| | | |
|---|--------------------|---|
| PROPAGATION SYSTEMS, INC. Ebensburg, Pennsylvania USA | | DRAWN BY: B.K. SCHILLING DATE: 6/3/15 |
| MAST MOUNTING BRACKET, LEG MOUNTED | | MODEL: PSIFML-1C-DA |
| CHANNEL/FREQUENCY: 107.1 MHZ | APPROVED BY: | DATE: |
| SCALE: | PART NO.: 1451-004 | SHEET: REV. |
| MATERIAL: | SIZE: A | TOLERANCES UNLESS OTHERWISE NOTED: FRACTIONS X/XX ± 1/16" DECIMALS XX ± .01" DECIMALS XXX ± .005" ANGLES ± 3' |
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PLAN VIEW



SIDE VIEW



FRONT VIEW

NOTE:
 1. FITS 1 1/2" TO 4" DIAMETER ROUND MEMBERS
 2. WEIGHT: 4.0 Lb
 3. WINDAREA: .1 Sq. FT. (TIA-222-F)

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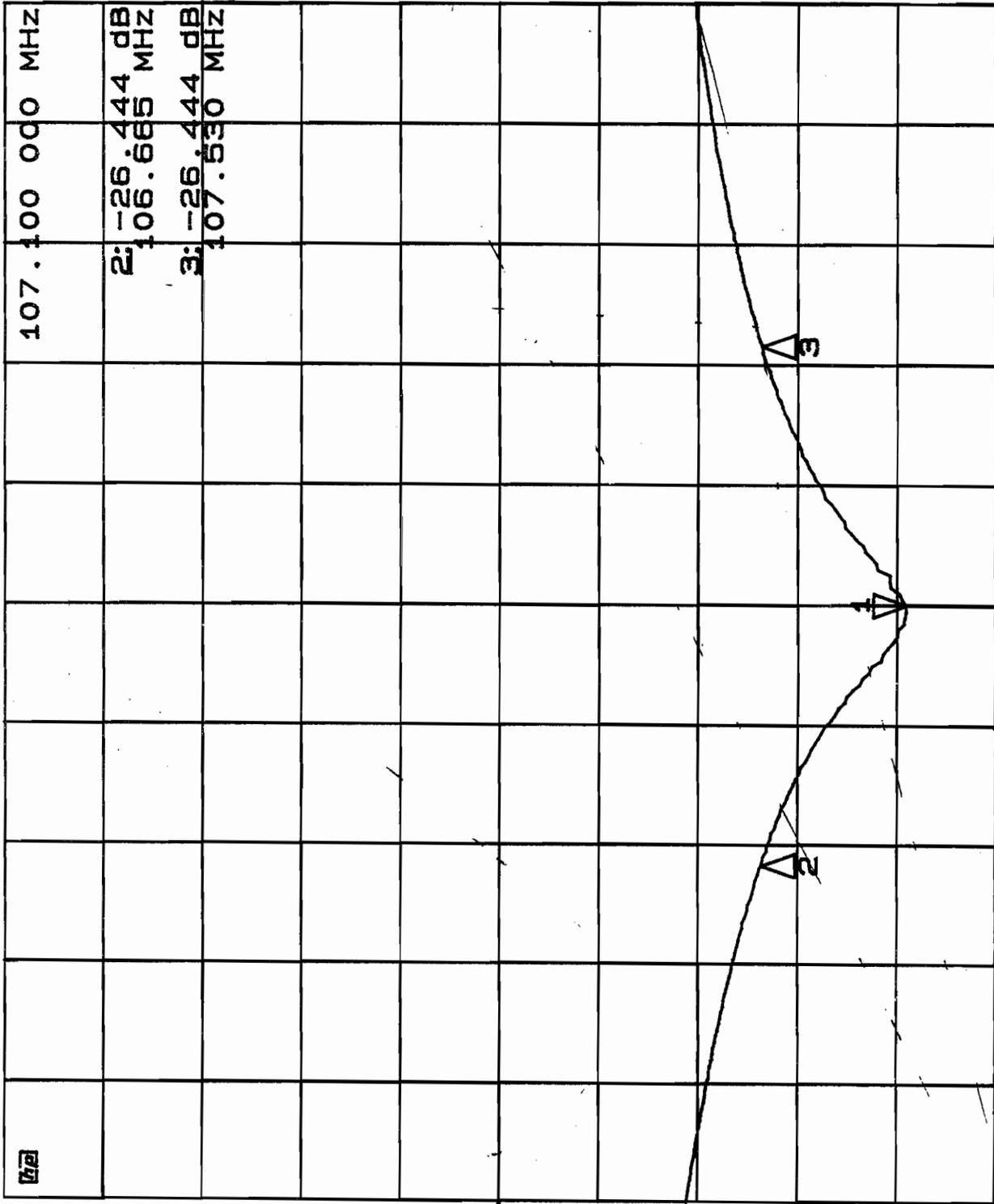
SIZE
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 Ebensburg, Pennsylvania USA 814-472-5540

SADDLE BRACKET

| | | |
|--------------------|-----------------------|----------------|
| MODEL: PSIFM | DRAWN BY: D.G. Kellar | DATE: 11/01/05 |
| CHANNEL/FREQUENCY: | APPROVED BY: | DATE: |
| SCALE: 1:2 | DRAWING NO.: 33-00155 | REV. |

CH1 MEM log MAG 10 dB/ REF 0 dB 1: -41.007 dB



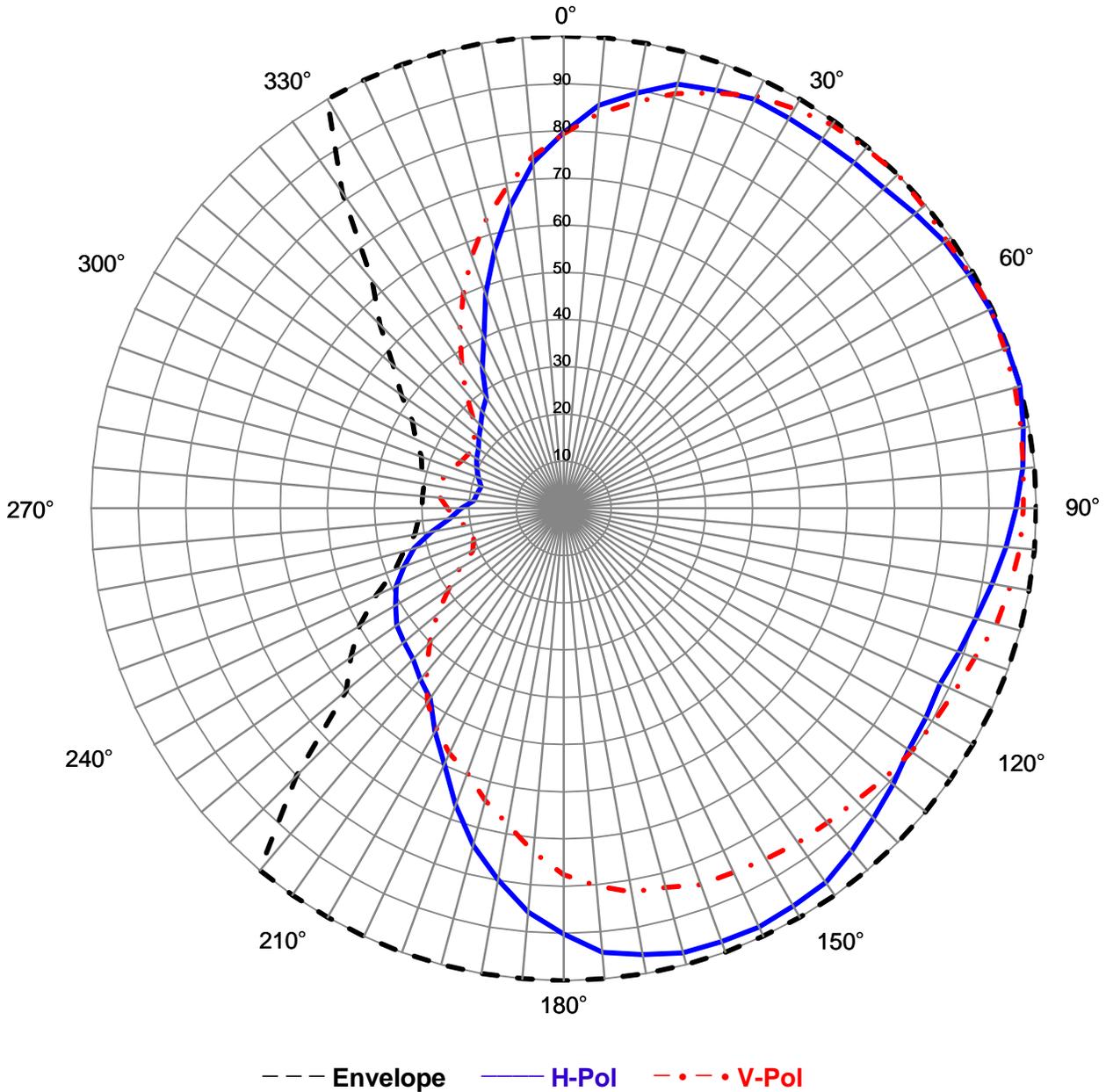
PRM

Cor

START 106.100 000 MHZ STOP 108.100 000 MHZ



Relative Field Azimuth Plane Pattern



| | | | |
|----------------|-----------------------|------------------|------------------------|
| Pattern Type: | Relative Field | Tower: | 41" Face |
| Antenna Model: | PSIFML-1C-DA | Leg Orientation: | 54°, 174°, 294° |
| Polarization: | Circular | Antenna: | 84° |
| Gain: | .69 (-2.29 dB) | Reference: | W296CS |
| Frequency: | 107.1 MHz | Date: | 7/7/2015 |